SUBTYPES OF HUNTER SYNDROME

<table>
<thead>
<tr>
<th>SEVERE (EARLY-ONSET) TYPE</th>
<th>BOTH TYPES</th>
<th>MILD (LATE-ONSET) TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begins from 2-5 years old</td>
<td>Symptoms increase in intensity over time</td>
<td>Begins in late childhood to early adolescence (age varies, &gt;5)</td>
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<tr>
<td>Significant intellectual disability</td>
<td>Frequent ear infection and fluid cause hearing loss</td>
<td>Little to no intellectual disability</td>
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<tr>
<td>Development plateaus around age 6</td>
<td>Carpal tunnel syndrome or other forms of joint stiffness</td>
<td>Longer life expectancy</td>
</tr>
</tbody>
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Communication Profile
- Hearing loss leads to speech and language delays of 2 years or more (more severe in severe type)
- Individuals with mild type benefit from hearing aid
- Breathing problems and bulky tissue can cause hoarse, deep voices & shallow quick breathing
- Thick lips and tongue can cause problems with articulation
- Severe type may benefit from alternative

Cause & Diagnosis
- **Genetic** disorder that can be identified via genetic testing
- **Mutation** produces lack of an enzyme
- **Enzyme** causes fluid build-up
- Can lead to several health issues

Physical Characteristics
- Thick lips/tongue
- Short stature
- Protruding forehead and abdomen
- Stiff joints
- Large head

For more information, visit:
www.HunterPatients.com
www.mpssociety.org